

Claims

- [c1] 1. An aircraft data transmission system comprising:
- (a) means for monitoring and collecting aircraft data;
 - (b) means for formatting the data or a portion of the data as a binary or text file;
 - (c) means for incorporating the binary or text file into an email message;
 - (d) means for transmitting the email; and
 - (e) communication means for carrying the email transmission to a ground station.
- [c2] 2. The system of claim 1 further comprising a GPS receiver.
- [c3] 3. The system of claim 2 wherein the communication means comprises a satellite modem and transceiver.
- [c4] 4. The system of claim 1 wherein the means for monitoring and collecting aircraft data comprises at least one aircraft databus interface.
- [c5] 5. The system of claim 4 wherein the means for monitoring and collecting aircraft data further comprises at least one discrete input interface.

- [c6] 6.The system of claim 1 wherein the binary or text file comprises a summary of the aircraft data or a portion of the aircraft data.
- [c7] 7.The system of claim 6 wherein the means for formatting the data or a portion of the data as a binary or text file comprises means for encrypting the binary or text file.
- [c8] 8.The system of claim 1 wherein the means for monitoring and collecting data comprises random access memory and a removeable non-volatile memory.
- [c9] 9.The system of claim 9 wherein the removeable non-volatile memory comprises a solid-state memory card.
- [c10] 10.The system of claim 1 further comprising a rules database comprising a plurality of aircraft data conditions and related actions, means for monitoring aircraft data and comparing aircraft data to the rules database.
- [c11] 11.A method of transmitting aircraft data from an aircraft comprising the steps of:
- (a)receiving digital flight data from an aircraft data bus or a discrete input or both;
 - (b)storing the data to a flight data file;
 - (c)creating a summary file upon a specified event or command;

(d)transmitting the summary file in the form of an email or attached to an email via a radio transmitter.

[c12] 12.The method of claim 11 further comprising the step of receiving the email at a ground centre and storing the summary file in a database.

[c13] 13.The method of claim 12 further comprising the step of forwarding the email to a user.

[c14] 14.The method of claim 13 further comprising the step of creating and transmitting a second email to a user containing or attaching a data file.

[c15] 15.The method of claim 11 further comprising the step of storing the flight data file onto a removeable non-volatile memory.

[c16] 16.The method of claim 15 wherein the removeable non-volatile memory comprises a solid-state memory card.

[c17] 17.The method of claim 11 further comprising the steps of
(a)monitoring aircraft data and comparing aircraft data to a rules database wherein the rules database defines at least one aircraft data condition and a related action; and
(b)taking the action upon the aircraft data matching the aircraft data condition.

[c18] 18.The method of claim 17 wherein the action to be taken is chosen from the group consisting of: creating a data file, recording data to a data file, closing a data file, saving a data file to a memory, or creating and sending an data file by email.

[c19] 19.An aircraft data collection and transmission system comprising:

(a)means for monitoring aircraft data;

(b)a rules database defining at least one aircraft data condition and a related action;

(c)means for comparing the aircraft data to the rules database; and

(d)means for implementing the action upon the aircraft data meeting an aircraft data condition.

[c20] 20.The system of claim 19 wherein the means for implementing the action comprises one or more of the following:

(a)means for creating a data file;

(b)means for recording data to a data file;

(c)means for closing a data file;

(d)means for saving a data file to a memory; and

(e)means for sending a data file by email, including an email client.